

ABSTRACT

A membrane device comprised of a porous monolith support formed from a reaction-bonded ceramic powder, fired in an oxygen-free atmosphere, the monolith defining a plurality of passageways extending longitudinally from one end face of the monolith to an opposing end face. A semipermeable membrane suitable for separating a feedstock into permeate and retentate is applied to the passageway walls of said monolith. The semipermeable membrane can be selected from the group of membranes suitable for microfiltration, ultrafiltration, nanofiltration, pervaporation, reverse osmosis, and gas separations.